

## **FLORISSANT FOSSIL BEDS**



## **NATIONAL MONUMENT**

### ***INTRODUCTION***

A mountain valley just west of Pikes Peak holds volumes of information about prehistoric life on Earth. Almost 35 million years ago, during the Eocene epoch, volcanic eruptions buried the then lush valley and petrified the redwood trees that grew here. A lake formed in the valley and the fine-grained sediments at its bottom became the final resting-place for thousands of insects and plants. These sediments compacted into layers of shale and preserved the delicate details of these organisms as fossils. The Florissant Fossil Beds are world-renowned, and in 1969 were set aside as a National Monument.

### ***STATEMENT OF PURPOSE***

The National Park Service preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education and inspiration of this and future generations. The National Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

### ***FLORISSANT FOSSIL BEDS MISSION***

The fossils of Florissant represent an important chapter in the study of evolution. The insects, plants and other life forms preserved by the volcanic events of the Eocene epoch allow us to compare the ecosystems of that age with those of today. Because the fossils found at Florissant are not found in such quantity or quality at any other place in the United States, their preservation and scientific study is critical. The goal of the National Park Service at Florissant Fossil Beds National Monument is three fold; provide facilities and programs for visitor understanding of the fossil story; encourage visitor appreciation of the role fossils play in understanding geologic history; promote the protection and preservation of fossil resources through visitor contacts.

## ***DIRECTIONS***

Florissant Fossil Beds National Monument is 35 miles west of Colorado Springs. From Interstate 25 take US 24 west to the small town of Florissant. Turn south on Teller County Road #1 for two and one half miles to the Visitor Center. The route is well marked by signs.

## ***AGENCY ORGANIZATION AND CONTACTS***

Superintendent  
Florissant Fossil Beds National Monument  
National Park Service  
PO Box 185  
Florissant, CO 80816  
719-748-3253 or FAX 719-748-3164  
Internet: [www.nps.gov/flfo](http://www.nps.gov/flfo)

## ***RULES***

Please stay on the marked trails. Pets are allowed in the parking lot and small exercise area near the visitor center and must be on a leash at all times.

The mission of the National Park Service is to preserve and protect the natural and cultural features of the Florissant Fossil Beds for this and future generations. Accordingly, no collecting of any kind is allowed. This includes, but is not limited to; the collection of fossils and petrified wood; picking of flowers; collecting of pinecones or other plant material.

Please make sure that all trash is packed out, or use the trash receptacles near the visitor center.

Hunting is not allowed at any time on the Florissant Fossil Beds National Monument.

Do not feed the animals. Wild animals should stay wild and get their own food. When you feed animals they become dependent on humans as a source of food. Animals can and do die from food given to them by visitors.

Bicycles are not allowed on the trails in the monument.

## ***FACILITIES***

The visitor center has fossil displays, other exhibits and a bookstore. The space is adequate for visitor services, but will not accommodate large groups or indoor programs. Water is available. Restroom facilities are available in the visitor center and in the nearby picnic area.

In addition to the visitor center, we have two "yurts" which shelter some of the petrified stumps. The "yurts" will accommodate small groups of 15 or 20 people for brief programs. They are not heated.

The Monument has 14 miles of hiking trails in segments of varying length. The trails allow flexibility in scheduling time and level of fitness. Two short loop trails are self-guided and are well suited for "on your own" activities.

A picnic area is located next to the visitor center and is convenient for a brown bag lunch after a busy morning or before an afternoon program. Another picnic area is about 1 1/2 miles away. Restrooms are located at both picnic areas.

## ***THINGS TO CONSIDER***

Traffic delays on US 24 are possible. In general, plan on travel time of one hour from Colorado Springs. No food service is available at the Monument. Small convenience stores are located in the village of Florissant. Two restaurants are able to accommodate moderately sized groups. Gasoline and limited automotive products are also available in Florissant.

Entrance fees are \$2.00 per person or \$4.00 per family. Those under 17 are free. Reservations are required for ranger assisted activities. Entrance fees are waived for school groups that have reservations. A donation of 50 cents per student is suggested for ranger assisted programs.

One chaperone per every 7 or 8 students is requested so that the ranger may be a guide, not a guard.

The Monument elevation is 8400 feet. Mountain weather is highly variable. Daytime highs in the summer rarely exceed the upper 80's; wintertime highs are in the 20's. Overnight summertime lows in the 40's are common and overnight lows in winter are below zero. Come prepared for changing weather summer and winter. Dress warmly in layers and bring rain gear for sudden summer showers. Sturdy shoes should be worn; sandals, cowboy boots and dress shoes are discouraged. Solar radiation can be intense at this altitude. Be prepared with sunscreen. Food and water are always a good addition to a daypack.

The Florissant Fossil Beds are part of the montane ecosystem, with forests of ponderosa pine, douglas fir, blue spruce, aspen and interspersed with mountain meadows.

### ***POTENTIAL HAZARDS***

Hazards are few, but can be severe. They include but are not limited to the following:

- Lightning during summer thunderstorms can strike from a storm many miles away. Seek shelter in case of nearby thunderstorms.

- Contact with small animals such as squirrels, chipmunks, rabbits and ground squirrels should be avoided. Small mammals may carry fleas or disease.

- Check for ticks in early spring and summer.

- Groups should stay together on trails to prevent lost hikers.

### ***MISCELLANEOUS INFORMATION***

The primary interpretive focus of the Florissant Fossil Beds National Monument is the world class fossils that are found in the shale formations of ancient Lake Florissant. Giant petrified sequoia stumps from that warmer and wetter climate are found on the trails and near the visitor center.

Another interpretive focus is that of the Hornbek Homestead a short drive from the visitor center. This 1878 Homestead represents the hard work, spirit and dedication of Adeline Hornbek. Interpretive programs can be arranged that explain the life of homesteaders and how the Homestead Act of 1862 provided economic opportunity to women.

Winter at the Monument brings snow and winter fun on cross-country skis and snowshoes.

## ***GEOLOGICAL HISTORY***

Pike's Peak Granite is the oldest rock at Florissant. More than a billion years ago, magma cooled deep beneath the Earth's surface. This pink granite was then uplifted to form the hills in the Monument as well as the 14,110 foot Pike's Peak 15 miles to the east. The granite uplift occurred 65-70 million years ago (mya). Rocks deposited on top of the granite were exposed and eroded away, leaving the granite exposed on the surface.

About 35 million years ago, a large volcano, about 18 miles to the southwest, dominated the region. Early eruptions produced mudflows, which inundated a forest of giant redwoods and other trees that grew in the valley. The mud hardened into tuffaceous mudstones, burying the trees up to a depth of 15 feet. Groundwater penetrated the tuff, dissolving silica. This mineral-rich solution saturated the wood and hardened as it filled between the cell walls, causing the wood to become petrified. These petrified redwood stumps--the bases of once-towering trees--are one of the more impressive attractions for the visitor.

Later, another volcanic mudflow impounded the stream drainage and a lake formed, much as reservoirs now form behind manmade dams. Mud and silt, along with volcanic ash from nearby eruptions, settled as sediments on the lake bottom. Insects, plant parts, leaves and seeds fell into the lake. These settled to the bottom and were quickly buried by sediment. The sediment compacted to form shale and the enclosed insects and plants were compressed to become fossils. The fossils are revealed when the shale is split along its natural bedding planes.

## ***CULTURAL HISTORY***

James Castello founded the community of Florissant in 1872 naming it after his hometown of Florissant, Missouri. The name means "flowering" or "blooming" in French. The name is appropriate because of the abundant wildflowers that bloom during the summer months and because of the abundantly preserved plant fossils. Ute Indians inhabited the area during their annual migrations, but left little impact.

A.C. Peale of the Hayden Survey published the first official report of the fossil beds in 1874. However, Theodore Mead completed the first collection of fossils in 1871. His collection ended up in the hands of Dr. Samuel Scudder, a paleoentomologist, who later visited the site and collected more than five thousand fossils during a five

day period.

Over the latter part of the nineteenth and early part of the twentieth centuries numerous expeditions collected tens of thousands of fossils. These specimens are found in museums around the world.

The giant redwood stumps were something everyone could get excited about. Earliest accounts from homesteader reports the ground littered with petrified wood, so much so, that in some places passage was difficult. The discovery of a petrified stump 12 feet tall and 38 feet in circumference solidified the fame of the area as a tourist destination. Excursions on the Colorado Midland Railroad featured fossil digs. Several families owned and operated guest ranches featuring the stumps and fossils and allowed collecting for a fee.

The popularity of the valley explains its long history of exploitation and collection. Areas once littered with petrified wood are now bare and priceless information about the past has vanished. Some of the families that owned property on what is now the National Monument tried to limit the removal of specimens. As early as 1920, proposals were made to protect the park under the National Park Service. But, because the lands were in private ownership, no legislative actions were taken.

During the 1960's, development threatened the Florissant fossil beds. Real estate promoters planned a sub-division over the fossil beds. Concerned citizens formed the Defenders of Florissant and stood ready to defy the blades of bulldozers. At the last minute a court injunction halted the housing development. President Richard Nixon signed legislation creating the Florissant Fossil Beds National Monument on August 20, 1969.